

PATENT COOPERATION TREATY
PCT
INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY
(Chapter II of the Patent Cooperation Treaty)
(PCT Article 36 and Rule 70)

REC'D 23 AUG 2005
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Applicant's or agent's file reference ---	FOR FURTHER ACTION		See Form PCT/IPEA/416
International application No. PCT/B2004/000568	International filing date (day/month/year) 24.02.2004	Priority date (day/month/year) 04.04.2003	
International Patent Classification (IPC) or national classification and IPC A47C17/22			
Applicant GRUPPO INDUSTRIALE STYLING			

1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.
2. This REPORT consists of a total of 5 sheets, including this cover sheet.
3. This report is also accompanied by ANNEXES, comprising:
- sent to the applicant and to the International Bureau) a total of 3 sheets, as follows:
 - sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).
 - sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.
 - (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)) , containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).

4. This report contains indications relating to the following items:

- Box No. I Basis of the opinion
- Box No. II Priority
- Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- Box No. IV Lack of unity of invention
- Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- Box No. VI Certain documents cited
- Box No. VII Certain defects in the international application
- Box No. VIII Certain observations on the international application

Date of submission of the demand 30.07.2004	Date of completion of this report 22.08.2005
Name and mailing address of the international preliminary examining authority:  European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx. 523656 epmu d Fax: +49 89 2399 - 4465	Authorized Officer MacCormick, D Telephone No. +49 89 2399-7959



**INTERNATIONAL PRELIMINARY REPORT
ON PATENTABILITY**

International application No.
PCT/IB2004/000568

Box No. I Basis of the report

1. With regard to the **language**, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.

- This report is based on translations from the original language into the following language, which is the language of a translation furnished for the purposes of:
 international search (under Rules 12.3 and 23.1(b))
 publication of the international application (under Rule 12.4)
 international preliminary examination (under Rules 55.2 and/or 55.3)
2. With regard to the **elements*** of the international application, this report is based on (*replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report*):

Description, Pages

1-6 as originally filed

Claims, Numbers

1-13 received on 19.01.2005 with letter of 07.01.2005

Drawings, Sheets

1/2, 2/2 as originally filed

- a sequence listing and/or any related table(s) - see Supplemental Box Relating to Sequence Listing

3. The amendments have resulted in the cancellation of:

- the description, pages
 the claims, Nos.
 the drawings, sheets/figs
 the sequence listing (*specify*):
 any table(s) related to sequence listing (*specify*):

4. This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

- the description, pages
 the claims, Nos.
 the drawings, sheets/figs
 the sequence listing (*specify*):
 any table(s) related to sequence listing (*specify*):

* If item 4 applies, some or all of these sheets may be marked "superseded."

**INTERNATIONAL PRELIMINARY REPORT
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Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes:	Claims	
	No:	Claims	1,4-6,9,13
Inventive step (IS)	Yes:	Claims	2,3,7,8,10-12
	No:	Claims	
Industrial applicability (IA)	Yes:	Claims	1-13
	No:	Claims	

2. Citations and explanations (Rule 70.7):

see separate sheet

**INTERNATIONAL PRELIMINARY
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Re Item V

**Reasoned statement with regard to novelty, inventive step or industrial applicability;
citations and explanations supporting such statement**

Reference is made to the following document: **D1: EP-A-0 868 870**
D2: EP-A-1 190 649.

The present application does not meet the criteria of Article 33(1) PCT, because the subject-matter of claim 1 is not new in the sense of Article 33(2) PCT.

The document **D2** discloses (the references in parentheses applying to this document): a mechanism for sofa bed and similar products, comprising a number of articulated quadrilaterals and synchronisation tools, with a least one lever (11) having an end hinged to a joint (at 12) between the frame (2), the headrest (2a), and the adjacent frame (2b); wherein said mechanism comprises three quadrilaterals (i.e. four-sided shapes: 7, 12, 15)

All of the features of claim 1 are therefore known from D2.

Furthermore, the present application does not meet the criteria of Article 33(1) PCT, in relation to claim 13 because the subject-matter therein is not new in the sense of article 33(2) PCT.

The document **D2** discloses (the references in parentheses applying to this document):

A sofa bed comprising an almost parallelepiped frame structure (2); a number of movable frames (see fig.1), bound together, that move according to roto-translating motions from the close to the open position (see figs 5-8), wherein in the closing position said frames are sequentially folded up (fig.8), while in the open position (fig.1), are consecutively aligned; wherein said structure uses a mechanism according to claim 1.

All the features of claim 13 are therefore disclosed in D2.

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Dependent claim 4-6 and 9 do not contain any features which, in combination with the features of any claim to which they refer, meet the requirements of the PCT in respect of novelty and/or inventive step, see documents D1 and D2, and the corresponding passages cited in the search report.

However, the combination of the features of dependent claims 2, 3, 7, 8 and 10-12 appears neither to be neither known from, nor rendered obvious by, the available prior art.

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Claims

- 1) Mechanism for sofa bed and similar products, comprising a number of articulated quadrilaterals and synchronization tools, **with** at least one lever **having** an end hinged to the joint (2') between the frame (2), the headrest, and the adjacent frame (3); and characterized by the fact that said mechanism comprises a quadrilateral (16), a quadrilateral (12) and a quadrilateral (17).
- 2) Mechanism according to claims 1, characterized by the fact that a first retain elastic mean is interposed between the lever (6) and the lever (1), while between the lever (1) and the fixed structure (7) is interposed a second retain elastic mean.
- 3) Mechanism according to claim 2, characterized by the fact that said elastic means can also be positioned on the elements bound to elements (6), (2) and (7).
- 4) Mechanism according to at least one of the claims from 1 to 3, characterized by the fact that said quadrilateral (12) determines the position of the headrest (2) in the bed configuration, being the headrest in vertical position in the sofa configuration.
- 5) Mechanism according to claim 1, characterized by the fact that the lifting can be obtained by means of two simple quadrilaterals; said quadrilaterals have one end hinged at the fixed structure (7), the other end at the frame (2) and are joined each other by means of a lever, which makes synchronous their motion.

REPLACEMENT SHEET

- 6) Mechanism according to at least one of the claims from 1 to 5, characterized by the fact that said quadrilateral (16) moves synchronically the rest of the mechanism.
- 7) Mechanism according to claim 6, characterized by the fact that said quadrilateral (16) comprises a 5-hole lever (6), hinged to the levers (8) and (9), having roto-translative motion.
- 8) Mechanism according to claim 6, characterized by the fact that said quadrilateral (16) comprises a 4-hole lever (6), directly hinged to the fixed structure (7), with rotatory motion around a point fixed with respect to the fixed structure (7).
- 9) Mechanism according to at least one of the claims from 1 to 8, characterized by the fact that said mechanism performs a particular path, which raises the mechanism to a height above the ground that makes the mechanism manageable.
- 10) Mechanism according to at least one of the claims from 1 to 9, characterized by the fact that said quadrilateral (17) moves the sliding system of the seat cushions (21).
- 11) Mechanism according to the claim 10, characterized by the fact that said quadrilateral (17) moves the seat cushion (21) by means of only two additional elements (4) and (5).
- 12) Mechanism according to claim 11, characterized by the fact that said lever (4) has at least three holes, one of them hinges a frame, upon which the seat cushions (21) are placed.
- 13) Sofa bed comprising an almost parallelepiped frame structure; a number of movable frames, bound together, that move according to roto-translating motions from the close to

REPLACEMENT SHEET

open position, wherein in the closing position said frames are sequentially folded up, while in the open position, are consecutively aligned, **characterized in that it uses a mechanism according to at least one of the previous claims.**